

APPARATUS AND METHOD FOR BUS POWER MEASUREMENT IN A DIGITAL SIGNAL PROCESSOR

5 Abstract of the Invention

10 In order to measure the power consumed by a bus in a digital signal processor,
each bus conductor has a lead electrically coupled thereto. The lead is coupled to
apparatus that provides a signal each time the logic state of the bus is changed. The total
number of logic signal changes for a given period of time is determined. Because power
15 is consumed by the bus only during logic state transitions, the total number of logic state
transitions can be multiplied by the power consumed by the bus during each transition to
provide the total power consumed during a predetermined period of time. The power
consumed by the bus during each logic state transition can be determined by simulation
or other techniques. The power consumed by the operation of the bus can be further
divided into power consumed by the internal (on-chip) bus and the external (off-chip)
bus.

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